

Translation

PATENT COOPERATION TREATY
PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 754-S04P0096	FOR FURTHER ACTION	
See Form PCT/IPEA/416		
International application No. PCT/JP2004/000482	International filing date (day/month/year) 21.01.2004	Priority date (day/month/year) 21.01.2003
International Patent Classification (IPC) or national classification and IPC G02F 1/133, G09G 3/36, 3/20		
Applicant SONY CORPORATION		

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/000482

Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

international search (Rule 12.3 and 23.1(b))
 publication of the international application (Rule 12.4)
 international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

the international application as originally filed/furnished
 the description:

pages 1-6, 10-15, 17 as originally filed/furnished
 pages* 7, 7/1, 8, 9, 9/1, 16, 18, 19 received by this Authority on 14.02.2005
 pages* _____ received by this Authority on _____

the claims:

nos. _____ as originally filed/furnished
 nos.* _____ as amended (together with any statement) under Article 19
 nos.* 1-8 received by this Authority on 14.02.2005
 nos.* _____ received by this Authority on _____

the drawings:

sheets 1-12 as originally filed/furnished
 sheets* _____ received by this Authority on _____
 sheets* _____ received by this Authority on _____

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, nos. 9-10 _____
 the drawings, sheets/figs _____
 the sequence listing (specify): _____
 any table(s) related to sequence listing (specify): _____

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages _____
 the claims, nos. _____
 the drawings, sheets/figs _____
 the sequence listing (specify): _____
 any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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1. Statement

Novelty (N)	Claims	1-8	YES
	Claims		NO
Inventive step (IS)	Claims	1-8	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: JP 2001-228459 A (Minolta Co., Ltd.), 24 August 2001, entire text; all drawings

Document 2: JP 11-44873 A (Toshiba Corp.), 16 February 1999, entire text; all drawings

Document 3: JP 2000-2869 A (Minolta Co., Ltd.), 7 January 2000, entire text; all drawings

Document 4: JP 2002-365608 A (Fuji Xerox Co., Ltd.), 18 December 2002, entire text; all drawings

Claims 1-8

The inventions set forth in claims 1-8 involve an inventive step in relation to the documents cited in the international search report and the documents cited in the written opinion.

None of documents 1-4 disclose the feature wherein, "when cholesteric liquid crystal is in a planar state, a row driver reference voltage switching means is controlled to make the first reference voltage the first voltage, thereafter the column driver reference voltage switching means is controlled to make the second reference voltage the second voltage, in addition the row drivers and the column drivers are controlled so that the

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Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

first reference voltage is applied to the row electrodes and the second reference voltage is applied to the column electrodes; and wherein, in order to give a desired portion of the cholesteric liquid crystal a focal-conical texture, the row driver reference voltage is controlled to switch the first reference voltage and the second reference voltage both to 0V and the row drivers and the column drivers are controlled, thereby controlling the supply of the first bipolar driving voltage and the second bipolar driving voltage to the cholesteric liquid crystal". Moreover, this feature would not be obvious to a person skilled in the art.

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claims 3 and 5 contain the wording "a second reference voltage-applying step for applying the aforementioned first reference voltage to the aforementioned row electrodes". However, this is believed to be an error and should read "a second reference voltage-applying step for applying the aforementioned second reference voltage to the aforementioned column electrodes."

Claim 6 contains the wording "the display method as set forth in claim 5", but the invention set forth in claim 5 is a "liquid crystal driving method."

Claim 7 contains the wording "a liquid crystal driving circuit as set forth in claim 6", but the invention set forth in claim 6 is "a display method".

Claim 8 contains the wording "a liquid crystal driving method as set forth in claim 7", but the invention set forth in claim 7 is "a liquid crystal driving circuit."